

Abstract Submitted
for the DPP14 Meeting of
The American Physical Society

Study of the 3D Structure of the Stagnated Z-Pinch AUSTIN ANDERSON, VLADIMIR IVANOV, University of Nevada Reno — Z pinches are the most powerful laboratory sources of x-ray radiation. Z pinches represent an unstable plasma configuration and are subjected by strong plasma instabilities at the ablation, implosion, and stagnation stages. MHD instability produce necks, kinks, and micropinches at stagnation. Knowledge of the 3D plasma distribution is important for interpreting 2D images of the pinch, as well as understanding the effectiveness of models that assume azimuthal symmetry using Abel inversion. Recent experiments were conducted with 266nm laser shadowgrams from 4 channels, evenly spaced in 45 degree increments. Channels were timed with 100 ps temporal accuracy to provide simultaneous imaging. Results and discussion on the azimuthal non-uniformity of the Z pinch are presented.

Austin Anderson
University of Nevada Reno

Date submitted: 11 Jul 2014

Electronic form version 1.4